



Georgia Institute of Technology

School of Civil and Environmental Engineering

E-20-J15
#3

Date: May 31, 2004

To: Paige Tolbert, PI, Rollins School of Public Health at Emory University
From: Jim Mulholland, Environmental Engineering, Georgia Institute of Technology

Re: annual report

In the final year of the three-year project that began July 1, 2001, air quality data have been collected and provided to Emory researchers for use in epidemiologic studies of air quality and health in Atlanta. Previously, air quality data for the period January 1, 1993, through August 31, 2000, were obtained for the Study of Particulates and Health in Atlanta (SOPHIA). The current work extends the study period through March 31, 2002. The air quality database has been updated through March 31, 2002.

Air quality data have been collected from a variety of sources, including air pollutant data from EPA's Air Quality System (AQS), formerly Aerometric Information Retrieval System (AIRS), particulate matter data from the Assessment of the Spatial Aerosol Composition in Atlanta (ASACA) network, and meteorological data from the National Climatic Data Center (NCDC) network. These data supplement data collected for the Aerosol Research Inhalation Epidemiology Study (ARIES) as a part of the SouthEastern Aerosol Research and Characterization (SEARCH) network. Hourly and daily values have been collected, and various daily measures have been calculated for use in the epidemiologic studies. Temporal and spatial analyses are provided directly to the Emory researchers. Meetings between Emory and Georgia Tech researchers are held to discuss data interpretation and modeling needs.

The project annual report is submitted in the form of a draft paper.

Environmental Engineering

School of Civil and Environmental Engineering

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E-20-J15
#3

AIR QUALITY LABORATORY PROGRESS REPORT
Continuous Atlanta Fleet Evaluation
GDNR Contract # 773-10071
Third Quarter, 2003

Research Sponsor:
Georgia Department of Natural Resources
Environmental Protection Division
Air Protection Branch

Continuous Atlanta Fleet Evaluation

Objective: Measure 360,000 vehicles annually in Georgia, comprising 50 % from the four counties that represent the previous basic inspection program, 30 percent from nine previously un inspected counties (9 counties), 10 percent from control counties (Augusta and Macon), and 10% from 8 counties adjacent to the boundaries of today' metro Atlanta area. The latter might be included in future in expanded I/M area. The measurements will be used evaluate the impact of Atlanta's enhanced inspection/maintenance (I/M) program on the previously untested fleet; observe the evolution of the Atlanta vehicle fleet; and improve Atlanta's mobile source emissions inventory for the State Implementation Plan.

Status: AQL collected 107,754 measurements during July, August, and September 2003. These measurements were collected during 13 days of measurements in the thirteen-county I/M area and 10 days of measurements in non I/M area. 72536 measurements were collected from ten 13-county sites, 6000 measurements were collected from one site in Macon, and 29038 measurements were collected from eight sites in 8 new counties in this three-month period.

Next Steps: Continue measurements in 13 counties, Macon and Augusta, and additional 8 counties.



Georgia Institute of Technology

School of Civil and Environmental Engineering

Date: July 15, 2003

To: Paige Tolbert, PI, Rollins School of Public Health at Emory University
From: Jim Mulholland, Environmental Engineering, Georgia Institute of Technology

Re: annual report

In the second year of the three-year project that began July 1, 2001, air quality data have been collected and provided to Emory researchers for use in epidemiologic studies of air quality and health in Atlanta. Previously, air quality data for the period January 1, 1993, through August 31, 2000, were obtained for the Study of Particulates and Health in Atlanta (SOPHIA). The current work extends the study period through March 31, 2002. The air quality database has been updated through March 31, 2002.

Air quality data have been collected from a variety of sources, including air pollutant data from EPA's Aerometric Information Retrieval System (AIRS) network, particulate matter data from the Assessment of the Spatial Aerosol Composition in Atlanta (ASACA) network, and meteorological data from the National Climatic Data Center (NCDC) network. These data supplement data collected for the Aerosol Research Inhalation Epidemiology Study (ARIES) as a part of the SouthEastern Aerosol Research and Characterization (SEARCH) network. Hourly and daily values have been collected, and various daily measures have been calculated for use in the epidemiologic studies. Temporal and spatial analyses are provided directly to the Emory researchers. Meetings between Emory and Georgia Tech researchers are held to discuss data interpretation and modeling needs.

A summary of results will be provided in the project final report.

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E-20-H15

#1

Date: June 24, 2002

To: Paige Tolbert, PI, Rollins School of Public Health at Emory University
From: Jim Mulholland, Environmental Engineering, Georgia Institute of Technology

Re: annual report

In the first year of a project beginning July 1, 2001, air quality data have been collected and provided to Emory researchers for use in epidemiologic studies of air quality and health in Atlanta. Previously, air quality data for the period January 1, 1993, through August 31, 2000, were obtained for the Study of Particulates and Health in Atlanta (SOPHIA). The current work extends the study period through March 31, 2002. The air quality database has been updated through March 31, 2001. Currently, the database is being updated again through March 31, 2002.

Air quality data have been collected from a variety of sources, including air pollutant data from EPA's Aerometric Information Retrieval System (AIRS) network, particulate matter data from the Assessment of the Spatial Aerosol Composition in Atlanta (ASACA) network, and meteorological data from the National Climatic Data Center (NCDC) network. These data supplement data collected for the Aerosol Research Inhalation Epidemiology Study (ARIES) as a part of the SouthEastern Aerosol Research and Characterization (SEARCH) network. Hourly and daily values are collected, and various daily measures are calculated for use in the epidemiologic studies. Temporal and spatial analyses are provided directly to the Emory researchers. Meetings between Emory and Georgia Tech researchers are held to discuss data interpretation and modeling needs.

A summary of results will be provided in the final report.